In the Specification

Please amend the second paragraph beginning on Page 20 as follows:

After the ARL 40 in the opening 44 has been removed, the etching of the via opening in the low carbon OSG layer 38 is begun in the same etching tool without breaking vacuum. The etchant flow is changed to an ambient containing fluorocarbons or NF_3. A hydrogen flow is added to the etch flow to control polymer formation during the etching of the OSG layer 38. The hydrogen flow may be added intermittently for short periods during the etch period or it may be added continuously at a controlled rate to control the rate of polymer formation. The appropriate regimen for the hydrogen addition to the etchant flow is preferably determined experimentally according to the etching parameters and the observed rate of polymer formation. The later is monitored by observing the behavior of the sidewall profile. Endpoint detection is provided by optical emission spectroscopy and sensing endpoint on the oxygen peak. After endpoint, the oxide etch is continued for a timed over-etch period of about 30%. This assures complete opening of the via 44 in the low-k layer 38 (Fig. 3c). Hydrogen may also be added during the over-etch period and, also for an additional period of several seconds after the flow of etchant gases has been terminated.

If the optical etch stop layer 36 was included, it is now removed by first stopping the hydrogen flow and then adding an O_2 flow to the fluorocarbon flow for a time period of between about 5 and 30 seconds. Residual photoresist 42 is then stripped, preferably by oxygen ashing although, in the alternative, liquid strippers may be used.

It is not necessary to remove the residual ARL 20 after the via is opened. The residual ARL could be left to become part of the ILD layer or it can be removed by CMP in a later process step. The final via 44, shown in Fig. 3d, has essentially vertical sidewalls and cleanly exposes the conductive wiring 34.